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Issues Surrounding the Design and Performance of Small Farmer Credit Programs: A Review of the Jamaican Experience

by

Douglas H. Graham

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I. INTRODUCTION

The experience of small farmer credit programs in Jamaica during the 1970's illustrates many of the classic dilemmas faced by these programs in most LDCs. This paper discusses these experiences but, in so doing, the reader is reminded that the performance of the Jamaican small farmer credit institutions and programs are replicated in many other LDCs and the critiques and discussion that follow should not be thought only relevant to the Jamaican case. The paper is organized into four sections. First a brief overview is made of the performance of the economy during the seventies. Second, the relative scope and role of the small farmer credit initiatives in the larger rural financial market setting is established; third a specific analysis of the three major small farmer credit programs is offered and finally we conclude with a set of recommendations to restructure and revitalize the rural financial markets in Jamaica. Throughout the paper attempts are made to distinguish between the issues of performance in the real economy. This issue is important since the factors and policies conditioning the performance of the economy in general and the agricultural sector in particular are crucial determinants of the performance of rural financial markets and programs.

II. ECONOMIC STAGNATION IN THE 1970's

During the late sixties and early seventies, the Jamaican economy registered respectable rates of growth (six percent for real Gross Domestic Product) although this was not true of the agricultural sector which declined at an average annual rate of four percent. From 1973 onwards, however, a severe economic recession set in. Total real gross domestic product decreased by 2.8 percent per annum between 1973 and 1978, negative growth being recorded in each of the last five years. Key sectors such as mining, manufacturing, construction, and commerce declined at average annual rates of three percent, seven percent, 10 percent and eight percent, respectively. The agricultural sector was the only productive sector to experience positive growth (three percent per annum) over the same period.

This dismal growth experience was associated with sharp contractions in domestic savings and investment. Domestic savings which averaged 17 percent of gross national product in between 1965 and 1970, averaged only 10 percent between 1971 and 1975, becoming negative thereafter. Though foreign investment helped to boost real national savings early in the decade, real net capital formation contracted almost continuously from J$250 million in 1970 to J$29 million in 1977.

The growing deficit in the balance of payments has had a seriously debilitating effect on the economy. Net foreign reserves fell from J$130 million in 1974 to <u>minus</u> J$196 million in 1977 to place Jamaica on the verge of international bankruptcy. A sharp, prolonged decline in export earnings combined with an inability to reduce imports sufficiently led to this state of affairs. Domestic inflation also accelerated during this period, largely as a result of the growing public sector deficit and rising import prices. Annual inflation rates (using the Consumer Price Index as the measure) rose from 9 percent in 1972 to 48 percent in 1978.

"Stagflation" affected the financial sector. Government debt increased substantially as a proportion of commercial bank assets (from 11 percent in 1970 to 33 percent in 1977). Commercial banks increased their holdings of government securities because the decline in aggregate demand and credit ceilings reduced private sector demand for bank credit, and because legal liquid assets reserve requirements were periodically increased. Interest rates, ranging between two percent and 12 percent on bank deposits, and seven percent and 12 percent on government securities during the past five years, did not keep pace with inflation. Negative real rates of interest ranging between eight and 40 percent prevailed. Consequently, savers have subsidized borrowers.

In summary, the Jamaican economy experienced a long economic recession since 1972. Exports declined, balance of payments deficits grew, and inflation rose to unaccustomed levels contributing to a negative real rate of interest situation in which savings have been penalized and borrowing subsidized. The agricultural sector, however, has been the one principal area experiencing some degree of positive growth although scarce and imported agricultural inputs raised costs to farmers during this period.

The extent to which substantial credit flows contributed to the favorable Jamaican agricultural performance is a matter of some controversy. The main thrust of this analysis is that fundamental weaknesses were evident in the design and operation of the public sector credit programs. These weaknesses along with the general economic disequilibrium undermined the effectiveness and viability of rural credit programs in Jamaica.

III. THE NATIONAL RURAL FINANCIAL MARKET SCENE

A. Growth

There have been five major formal sources of agricultural credit in Jamaica throughout the 1970s: the commercial banks; the Agricultural Credit Board; the Jamaica Development Bank; the Self-Supporting Farmers Development Programme; and the Crop Lien Programme. Commercial banks are the largest single source of credit to the agricultural sector. This credit is largely short-term and goes to medium sized and larger farmers with good credit ratings and limited risks. In more recent years the commercial bank network has extended loans to large government agricultural cooperatives such as the sugar cooperatives which bought out the former large sugar estates that had been in private hands.

The remaining agricultural credit sources are public sector institutions or programs. The oldest of these public institutions is the Agricultural Credit Board created in 1960. This institution has two portfolios: one serving larger farmers through direct loans; the other aimed at small farmers and channeled through the national network of small people's cooperative banks. Loans in both cases are largely short-term and seasonal and, in the case of the people's cooperative banks, includes small loans as well.

The Jamaica Development Bank began making large, medium to long-term "development" loans to essentially medium to large farmers from 1969 onwards. The Small Farmer Development Programme was also established in 1969. It makes medium to long-term loans to much smaller farmers than those serviced by the Jamaica Development Bank. Limitations on farm acreage, gross sales and assets have created a clientele for the SSFDP that can best be characterized as medium sized farmers. Finally, there is the Crop Lien Programme created by the government in 1977 and administered by the Ministry of Agriculture through their extension agents in conjunction with the people's cooperative banks which disburse these loans. Crop Lien loans are strictly small, short-term and seasonal, limited to domestic foodstuff producers and focused on small farmers with little or no previous loan experience.

Table 1 summarizes the growth of formal agricultural credit through these five major sources. Although loans outstanding in nominal terms grew almost seven-fold in eight years, this increase was only two times in real terms, reflecting the inflationary erosion of the capital base for agricultural lending. The large rise in loans outstanding between 1974 and 1975

(Table 1) is partially due to a change in the Bank of Jamaica's classification of agricultural loans reported by commercial banks in 1975. Some kinds of loans which had previously been reported under distributed trades and other sectors were hereafter listed as agriculture. It is estimated that slightly less than half of the net increase in loans outstanding from 1974 to 1975 were due to this change in classification (Graham, Bourne and Begashaw, 1978, Ch. IV). In 1978 there was practically no change in the amount of credit in nominal terms, and a pronounced contraction in real terms.

B. Institutional Changes

Table 2 permits an insight into the changing roles of the several institutions and programs comprising the agricultural credit supply network during the 1970s. The sources are classified into the farm size categories that most typically reflect the majority of their portfolio. From this profile it can be seen that large farmers benefited handsomely from the agricultural credit initiatives in Jamaica during the 1970s. Commercial banks and the Jamaica Development Bank increased their relative portfolio substantially until 1977 while, at the other end of the spectrum, the small farmer oriented Agricultural Credit Board Peoples Cooperative Bank program lost ground markedly. In 1977 and 1978 there was an improvement in the credit status of small farmers. Two factors accounted for the later shift: first, the Crop Lien Programme was established and people's cooperative bank credit expanded; second, commercial banks reduced their lending to agriculture. The Crop Lien Programme was the largest source of credit increase during that year, eclipsing the customarily dominant role of commercial banks within the total portfolio. No doubt the substantial erosion of the older small farmer credit line through the Agricultural Credit Board-PC network had caused sufficient concern and grievances that a new initiative and program was felt necessary to redress this imbalance. Unfortunately this initiative led to substantial problems of default.

In addition to the large vs. small farmer profile depicted in Table 2, there is a foreign vs. domestic resource division that merits discussion. A large proportion of the loanable resources of the Jamaica Development Bank and the Self-Supporting Farmers Development Programme come from foreign sources (i.e. the World Bank and Caribbean Development Bank in the former case and the Inter-American Development Bank in the latter case). Domestic sources are almost exclusively geared to short-term seasonal loans (through commercial banks, the Agricultural Credit Board and Crop Lien Programme) while foreign resources are earmarked for medium to long-term developmental loans (the Jamaica Development Bank and the Self-Supporting Farmers Development Programme). In 1970, the rural financial market expanded to include the new, internationally financed Jamaica Development Bank and the Self-Supporting Farmers Development Programme. Whereas in 1969 they played no role whatsoever, these institutions were the most rapidly growing sources of funding for agricultural credit between 1974 and 1978. The role of international resources was crucial to the expansion of total credit supply during the 1970s, and more importantly, indispensable towards lengthening the term structure to include developmental financing. However, growing problems of delinquency and declining foreign exchange earnings raise serious questions as to whether Jamaica will be able to secure new international financing for these activities or, for that matter, even service the current debt obligations incurred on past loans from the international agencies.

C. Performance

It is useful to assess the performance of the system as a whole. Column 2 of Table 3 underlines the fact that total credit has been rising substantially as a percent of gross domestic product since the early 1970s. This reflects the growing rate of inflationary financing in the economy through substantial increases in the money supply. Agricultural credit per se slightly declined as a proportion of total credit (panel A, col. 1). However, from 1975 to 1977, it has been growing more rapidly than total credit. (For reasons cited earlier on pages 5 and 6, the only unambiguous trends are those from 1970 to 1974 and from 1975 to 1977.) The agricultural credit/agricultural GDP ratio (col. 3) increased from 32 to roughly 37 percent in the earlier subperiod and from 56 to 63 percent between 1975 and 1977. This rising average ratio of agricultural credit to agricultural gross domestic product implies an even higher marginal agricultural credit-agricultural GDP ratio. As a result of the credit slowdown (col. 1, Table 3), the average credit ratio decreased substantially in 1978.

The ratio of agricultural credit to agricultural GDP has been rising in recent years because of the "deadwood syndrome." Many of the loans outstanding are deadwood, that is, in permanent default on the one hand, and very likely permanently diverted to non-agricultural uses on the other hand. The high and rising credit/GDP ratio when combined with high and rising delinquency strongly suggest that farm loans are either not being applied to agricultural activities or, are being applied inefficiently when compared to earlier years. Given the growing stagnation in the economy as a whole, it is possible that much of this credit may be leaking out of the economy as capital flight as well as into real estate, land and other inflationary hedges. This indicates the need for a reform of the credit strategies adopted in recent years.

The final issue warranting discussion in this section is the "implicit subsidy" built into the current credit programs. Panel B of Table 2 present estimates of the real rate of interest for agricultural credit. The average interest rate charged for agricultural credit (from a low of three to seven percent in government programs to 13 to 14 percent in commercial banks) is clearly below the average rate of inflation (col. 2 vs. col. 1). The net result is a negative real rate of interest (col. 3) which in recent years has been rising dramatically.

Furthermore, if one multiplies the real rate of interest times the agricultural credit/agricultural GDP ratio one can estimate the implicit credit subsidy as a percent of agricultural GDP. Column 5 shows that in 1978 this reached 9 percent, a high level by any standard.

Thus, not only does credit appear to be increasingly used in an inappropriate (i.e. non-agricultural) or inefficient fashion, but also the beneficiaries or borrowers are enjoying a sizable subsidy. The social costs of this credit strategy could be substantial if, as indicated earlier, relatively large borrowers form an important part of the credit portfolio. This calls for a more detailed evaluation of the performance of the major institutions and programs comprising the national system of agricultural credit in Jamaica. The remainder of this paper, however, will concentrate on the small (and medium sized) farmer credit programs, their performance and their major problem areas.

IV. SMALL FARMER CREDIT PROGRAMS IN JAMAICA: PERFORMANCE AND PROBLEMS

Prior to discussing each small farmer program separately, it is helpful to clarify the degree to which these programs have penetrated the small farmer scene in Jamaica. Separate field studies by a UWI-OSU research team suggest that this spread is still limited in many areas of the island. Based on a large sample of farmers in Northern St. Catherine that statistically represented close to 3,000 farmers, only 22 percent of the surveyed farmers had any form of formal credit in the last five years. In a comparable region in Southern St. Elizabeth representing a farm population of 1,000 farmers, only 18 percent registered access to formal credit in the same period. These are predominantly small farmer regions and were chosen precisely to determine, among other things, the degree to which small farmer areas have been reached by formal credit. Between 75 to 80 percent had never had access to formal loans in the last five years. The results show that this access is limited, even in the face of a large effort to reach these farmers with the Crop Lien Programme.

Secondly, it is important to point out that many of these farmers, though excluded from the formal credit market, are still active in loaning and borrowing funds and in savings activity as well. In both these areas informal credit activity reached 65 percent of the total sample. Moreover, the total dollar amount of informal loans was considerably larger than the total dollar amount of formal loans through all the loan programs (and commercial banks) recorded in the area. Savings activity was also high with roughly 40 percent of the farmers in these two areas holding a formal savings instrument in the last year. Finally, off-farm employment was widespread among these small farm households with almost one-half of the farmers surveyed being active in part-time off-farm work. More than one-third of the farmers stated that off-farm income was more important than farm income in total family income. Moreover, it is interesting to note that roughly 85 percent of the farmers engaged in off-farm employment also were involved in either formal or, more importantly, informal credit activity. Thus, in summary, small farm households in the Jamaican setting, although not widely reached by formal credit programs, have alternative means of generating liquidity, namely informal sources from friends and neighbors and, to an important extent, off-farm income from their off-farm employment. These informal and off-farm income sources diminish (and access to formal sources increase) as farm size increases. The foregoing illustrates the way in which small farmers live and function within a setting in which their access to more formal lines of credit is limited. Furthermore, it would appear that these sources of liquidity are sufficient to generate a respectable level of savings, given the large number of farmers who either hold savings deposits or make loans to other farmers. With this as a background it is useful now to review the three major efforts to provide small farmer credit on the island. In so doing, attention will be limited to the more important issues and problem areas in designing and administering these programs rather than getting involved in any extensive detail on their historical background or organizational structure.

The ACB-PC Bank Network

The People's Cooperative Bank network (numbering some 115 small branches scattered throughout the island) dates back to the early 20th Century. From 1960 onwards the Agricultural Credit Board (ACB) has been the principal source of government funds allocated to these small banks. The loans allocated through this network are generally small in size (from several hundred up to 2 to 3 thousand dollars), largely for seasonal production loans. Local bank committees along with the PC Bank manager and, on occasion, a loan officer from the ACB review loan applications which are then processed through the central office of the ACB in Kingston. After review and approval in Kingston the loan funds are then granted from the ACB revolving fund and allocated out to the branch in question for disbursement to the farmers. Loans are granted at 6 percent interest to farmers with the branches expected to repay the ACB at a rate of 3 percent, thus leaving a margin of 3 percent to cover lending costs at the branch level.

Several important features stand out in this loan program which can be summarized as follows:

1. These institutions do not engage in any savings mobilization activity except for the relatively inconsequential "share" contributions (i.e. 2 dollars) required from the farmer. No savings deposit function exists. Thus, these farmers deposit their savings in branches of commercial banks (from whom they do not receive loans) while receiving loans from the PC Banks.
2. As a result of no. 1 above, the PC Banks are used as "retail" outlets for centrally generated funds. Given the vissicitudes of government funds and budget constraints these funds are not a constant flow but rather vary markedly creating uncertainty at the field level about the reliability of future funds.
3. The PC Banks have frequently been used as the retail arm for disaster relief as well as for the more normal revolving funds. Disaster relief has frequently been structured as loans, though farmers invariably consider them grants, thus complicating loan recovery and, in part, injecting a grants mentality for the normal portfolio as well.
4. Local accounting and bookkeeping procedures at the branch level are frequently rudimentary, confusing and/or non-existent in many important respects. Questionable practices at the branch level have induced the ACB to intervene and manage some branches with their own management for varying periods of time.

5. Examples of deficient reporting can be seen in not having arrears records based on amounts due. Instead, arrears are merely recorded in aggregate absolute dollar amounts at the central office but not associated with a time profile of arrears on amounts due. At the branch level such a measure could alert bank managers to the problem areas and problem farmers in their loan portfolios. Other data useful for reference and easy to record would be loans made by enterprise or crop-type and by loan size. Unfortunately many PC Bank managers and their assistants are not sufficiently trained to engage in any systematic documentation of loan information that can be used to monitor loan performance or help in the analysis of loan problems. This, in turn makes it difficult for the central office to prepare up to date annual reports with detailed loan performance data.

6. Loan recovery is a perennial problem in all the PC loan portfolios. High arrears rates are common representing close to 40 percent of the loans outstanding in 1978. No ratios or rates are available on the amounts due. Loan recovery is compromised by the difficulty and expense involved in enforcing contracts and prosecuting delinquent borrowers in the courts. While some of the more astute and determined PC Bank managers diligently pursue this effort for some of

their most serious arrears cases, they frequently encounter difficulties in collecting.

7. The fixed interest rate of 6 percent on all loans is unrealistic and counter-productive in the face of rising inflation of 20 to 30 percent per year. The costs of administering loans rises with the general rise in prices yet loan recoveries are eroded through a decline in their real value. Farmers are enjoying a negative real rate of interest (i.e. a subsidy) while the PC Banks and the ACB are suffering from a growing cost squeeze which in turn demands further government subsidization.

What emerges from this picture of the PC Bank network is a government subsidized loan program that would have little chance of survival if it had to depend on its own loan recoveries, particularly with the current low nominal rate of interest. This is an extensive network that the government has found convenient to use to disperse disaster funds in the past or to retail new funds such as the Crop Lien Programme. At no time was there ever a serious effort to prepare any of these institutions to mobilize savings locally and in part reverse the top-down centralized role of merely being a retail agent for government funds.

In all fairness to the PC network and to some of the diligent administrators in the ACB that try to manage the declining revolving fund within tight budgets, many PC Banks are still generally well regarded in their communities. The loan committees are drawn from the local farm communities and, one can find cases where determined bank managers work tirelessly to protect their loan portfolios, lecturing the loan committees for more careful loan appraisals, badgering delinquent farmers to the point of prosecutions and carefully husbanding their loan recoveries by investing them in local savings deposits of commercial banks (rather than returning them to the Central ACB office). In doing this they can have a local source of funds for relending without resorting to the uncertain ACB dispersals from Kingston. This latter tactic suggests that greater decentralization rewarding local initiative and responsibility, combined with a local capacity for mobilizing savings and a more flexible interest rate policy to cover lending costs might go a long way in helping some of the better managed PC Banks to mature into more complete and viable lending institutions that would be less dependent on outside subsidized support.

The Self Supporting Farmers Development Programme (SSFDP)

The SSFDP represented a major change in the approach to small to medium farmer credit delivery systems in Jamaica. This is your classic supervised credit program. Introduced through the ACB back in 1969 and then transferred to the Jamaican Development Bank (JDB) in 1974, the SSFDP gains its funds through low interest loans from the InterAmerican Development Bank (IDB). The Jamaican government contributes budgetory support to help cover the high overhead costs associated with the technical assistance component of the program. Loan rates to farmers are at 7 percent while the IDB charges a 3 percent interest charge.

Four features stand out in the design of this program: (1) medium to long-term investment loans geared to changing the production function (i.e. modernizing) on its clients farms; (2) a large technical assistance component is built into the loan to promote and then monitor this technical change; (3) thirteen regional offices disbersed throughout the island act as the major points of loan monitoring and technical supervision; and (4) small to medium sized farmers from 5 to 25 acres are the principal target group serviced by the program.

These features stand out in contrast to the shorter term, seasonal loans that characterize the ACB-PC system. Also, the technical assistance component built into the loan contract was a new approach in the Jamaican small farmer setting. Whereas the ACB-PC Bank loan program generally serviced existing farm technology and practices, the SSFDP was designed to introduce technical change and changed farm practices. As one would expect the average loan size was much larger in the SSFDP portfolio than in the ACB-PC portfolio, ranging from roughly 4 to 5,000 dollar loans up to 40 to 50,000 dollar loans. Finally, the average farm size was generally larger. Whereas, the ACB-PC system generally serviced farmers in the 3 to 10 acre range, the SSFDP was largely servicing a portfolio (in terms of the distribution of the <u>value</u> of its loan capital) from 10 to 25 acres.

The operational performance, successes and remaining problem areas are summarized below. Again it should be emphasized that the problem areas identified here are characteristic of most supervised credit programs and not limited to the Jamaican program alone.

1. Field studies strongly suggest that the SSFDP has been successful in promoting new production technology and new enterprise types on their clientele farms. At the same time there has been an apparent increase in output and net worth of the farms serviced. The foregoing would suggest that there has been only limited credit diversion to non-agricultural uses, a common problem in non-supervised credit programs.
2. The SSFDP has the lowest arrears rates of all the public sector credit programs on the island probably reaching 15 to 20 percent for the amounts due. Of this amount a large part may be associated with the earlier farm customers from 1969 to 1974 when disbursement was too rapid and the loan appraisal and loan monitoring responsibilities were not as effective as in the post-1974 period. Still it should be pointed out that the program still does not structure its accounting procedures in such a way as to be able to determine easily arrears on amounts due. It would be in the interest of the program to do this, not only to detect potential problem clients earlier in the life of the loan (and

take corrective measures with the farmer) but also to clarify the degree to which the current aggregate arrears rates is primarily a result of the earlier non-JDB chosen farm clientele (as is commonly believed) and how much a result of the more recent farm clientele.

3. With the exception of the above noted deficiency the data collection and accounting skills and efforts in the program are superior to those in other public sector programs. Information on the farmer is more extensively recorded and, one would assume, loan monitoring therefore more effective than in other programs. The two areas in which improvement is called for is in the collection and presentation of the arrears data (as noted in no. 2 above) and a redesign of the bookkeeping procedures to first determine the true lending costs incurred by the institution and, secondly, associate these costs with specific program functions (such as technical assistance; regional vs. central office activity, loan collection and recovery activity, etc....). If data could be collected and recorded in this fashion, officials could engage in a more analytical study of the current and potential problem areas that need to be dealt with.

4. The SSFDP illustrates the classic trade-off between relatively low arrears and high supervisory costs and high arrears and low or no supervisory costs. The SSFDP program falls into the former category while the other

public sector credit programs on the island (whether servicing large or small farmers) fall into the latter category.

5. Item 4 above raises the question as to whether the broader social or economic benefits of supervisory and especially technical assistance (increased farm output at lower cost) outweigh or justify the high administrative costs of offering this supervisory role. First because the program cannot "internalize" these benefits (i.e. it is society at large that receives these benefits of increased farm output at lower unit costs) does not mean they shouldn't incur the higher initial administrative costs to generate these benefits. Crucial here is a more detailed evaluation of the technical assistance role through independently contracted surveys of the farm clientele to resolve essentially two issues: (1) the degree to which technical assistance is relatively all that important in generating the recorded increases in output and changes in farm practices; and (2) the degree to which the loan monitoring and loan recovery efforts are important in keeping down the arrears rates.

6. Common to most supervised credit programs, the SSFDP is an incomplete financial institution in that it is entirely dependent on outside funding and has not engaged in any savings mobilization activity. Given the

decline in outside funding and the increased uncertainty and variation of these sources, and, given the presumed success of the SSFDP farm clientele in increasing their income, a logical strategy to gain more self reliance and independent control of one's activities would be to broaden the mandate and role of the program to include the mobilization of savings from these farmers. This would lower the costs of receiving funds from outside, increase institutional viability and autonomy and draw the farmer into a closer and more complete identification with the institution.

7. Consonant with any effort to make the SSFDP a more complete financial institution (as noted in item 6 above) is the need to balance its asset or loan side with more short-term loans to service its farmer clientele. This would also allow it to offset and service the short-term savings deposit function discussed above as well as meet the legitimate farm need for working capital to use in conjunction with implementation of its investment loan.

8. The graduation syndrome is another important issue in supervised credit programs. To what extent should the SSFDP encourage its more established and secure customers to leave their portfolio and try to "make it on their own" (i.e. through more loans from commercial banks while the program concentrates on incorporating

into their program new and riskier farmers who may need more supervisory help? The "turnover" or graduation of farmers out of the SSFDP portfolio has not been studied nor, I suspect, considered as an important function for the program. Given the time and effort invested in these more successful farmers, no institution will want to lose them since their overall performance record might suffer with higher arrears rates and a higher administrative cost load with the riskier and newer clientele. Finally to the extent that the SSFDP chooses to become a more complete and viable lending institution (as discussed in items 6 and 7 above) it would want to keep these customers in its portfolio.

9. Finally a more flexible interest rate policy is called for in this program as in the ACB-PC Bank program. Lending costs have increased with inflation which would suggest that a higher rate is called for to re-establish the previous spread or margin in former years. At the same time the purchasing power of the loan portfolio gained through loan recoveries will decline with inflation if negative real rates of interest prevail for any period of time. Furthermore, to the extent that the SSFDP is concerned about gaining more autonomy, relying less on outside funding and possibly incorporating a savings mobilization role, realistic and flexible interest rates are necessary to protect the real value

of its portfolio which would now be more dependent on successful loan recoveries.

In summary, the role and performance of the SSFDP program illustrates many of the problems of public sector small farmer credit programs. In addition, its supervisory and technical assistance role creates a set of additional issues and potential problem areas that other public sector credit programs do not experience. The two most important issues noted above that need more informed discussion and analysis in the Jamaican setting are the degree to which the supervisory functions within the SSFDP are justified and, second, the degree to which this program should transform itself into a more complete lending institution in order to better prepare itself for a future with less outside funding.

The Crop Lien Programme

The Crop Lien Programme, introduced in 1977, represents yet a third effort to create a small farmer credit delivery system in Jamaica, one that has turned out to be the most controversial of the three. In contrast to the previous two programs, this effort was initiated and controlled in a non-financial institution - the Ministry of Agriculture. The stated motive for this initiative was to service the short run seasonal credit needs of the Emergency Production Plan, a program set up in 1977 to relieve the growing balance of payments constraint on the importation of foodstuffs. Thus the purpose was to promote domestic foodstuff production of vegetables, legumes and root crops to replace the import of cereal products. The Ministry felt the existing credit programs were too large farmer oriented; not directed towards the import-substitution of domestic foodstuffs and not reaching a sufficiently large number of small farmers.

In 1977 roughly 10 million dollars were allocated to this effort, the largest single source of credit for agriculture during that year. By 1978, under growing criticism and budgetory constraints this was cut in half. Succeeding allocation in 1979 and 1980 have been less than 5 million dollars. The operational design, performance and growing controversies surrounding this program can be summarized as follows:

1. The program did reach a relatively large number of farmers during its first year, roughly 27,000 with loans ranging from as low as 200 to a high of 4,000 dollars. This mislead Ministry officials into believing that this was responsible for the large increase in domestic foodcrop output in 1977 and 1978. However, their own statistics show that many of these farmers had extremely small acreages harvested. The increase in food output was much more a function of the output of the much larger number of farmers and acreage in foodstuffs not in the program and, even more importantly, a result of two years of unusually good rainfall following the droughts of 1974-76.

2. Wholesale delinquency was the single most visible and controversial performance indicator of the program. Less than 5 percent of the farmers repaid their
a seasonal production loans two years after its inception.

3. Key operational features that led to the widespread delinquency were:
   a) far too rapid disbursement of funds
   b) perfunctory loan appraisals
   c) use of extension agents, who hitherto had never dealt with credit activity, to act as loan appraisers.
   d) no collection effort made with voluntary compliance expected.
   e) use of the ministry as loan source created image this was another subsidy program.
   f) no collatoral required
   g) farmers feeling that arrears would bring no effective sanctions.

4. Farmers appear to be dissatisfied with this program and voice complaints about being forced to grow crops they otherwise would not have chosen to gain the first installment and their incurring fairly high transactions costs to attempt to gain second installments frequently without success. PC bank loans are invariably rated more favorably as a loan source by farmers surveyed in the Crop Lien portfolio. The PC bank loan program had a more established presence and role in the farmer

communities, did not require specific crops to be grown, allowed a greater role for the farmer in influencing loan terms and issued their loans in time for effective use compared to the Crop Lien administration.

5. Several important negative externalties were incurred in the operation of the Crop Lien Program such as:
   a) compromising the performance of the PC banks portfolio since they were forced to retail the Crop Lien loans after the extension agents approval. This took PC staff away from the monitoring of their own loan portfolio and, at the same time, the "grants mentality" generated by the Crop Lien Program may have affected their own loan recoveries.
   b) extension agents were drawn off of their traditional functions to act as credit agents, a task they were ill-suited for, with a consequent morale problem emerging.
   c) the wholesale failure of loan recovery added to the government deficit exacerbating inflation and stabilization efforts.
   d) the recent transfer of the Crop Lien Program into the JDB may create greater problems for the SSFDP program to administer their own portfolio while at the same time being forced to inherit a delinquency-ridden portfolio.

The Crop Lien Program could stand as a testament as to how not to design a credit program. Unfortunately the potential for disaster was not foreseen in its initial design and administration. It would appear that many of these lessons have still not been learned in that political pressure has persisted in an attempt to restructure and continue the program in some new format.

The two greatest social costs incurred in persisting in this effort in a new guise is the potential damage this program could do to one of the more successfully run credit programs on the island (i.e. the SSFDP) and, secondly, the high opportunity cost incurred in not using the resources devoted to the Crop Lien effort to address directly many of the important bottlenecks and problem areas affecting the economic rate of return to agricultural activity in Jamaica. Activities that come to mind here are a better financed research effort, an up-graded extension service and an improved marketing structure among others.

V. CONCLUSIONS

The performance history of the three small farmer credit programs illustrates the difficulties of attempting to reach the small farmer with formal lines of credit. Several lessons emerge from this experience. First, within the given constraints of risk, political interference, interest rate policy and limited organizational and administrative skills none of these programs are viable in the sense that they could maintain their current credit portfolios in real terms and cover their costs with their loan recovery record. They all have to be heavily subsidized.

Second it is clear that loan appraisal procedures are rather perfunctory in two of the programs and very expensive in the third (i.e. SSFDP). At the same time loan monitoring and collection procedures are weak to non-existent in two and expensive in the third. Even if one accepts the premise that some element of subsidy is necessary and justified, it is clear that these programs should attempt to measure and consider the true lending costs they are incurring in trying to service these farmers. Only through an effort that quantifies and clarifies the relative proportion of these costs (as a percent of the loans issued) as well as identifying the incidence of these costs by program or administrative function can the institutions or programs in question appreciate the need for requiring a larger spread in their borrowing and lending rates of interest to protect themselves and/or economize on the more costly program elements.

Third, high delinquency is one of the most costly elements affecting the viability of all three programs. Arrears measures based on amounts due rather than on credit outstanding is a crucial piece of information needed to prevent early-on the potential for the rapid deterioration of a program's portfolio. This argues for much more careful and intelligently designed data collection efforts than those typically associated with these programs.

In addition to these more "micro-oriented" administrative reforms within programs, there are important "macro-oriented" considerations that have been touched on in this review. Important here is the frequent but misleading idea that "supply-leading" credit programs can resolve the more deep seated real economic problems lowering the economic rate of return to agricultural activity. Throwing more credit into the farm sector will do little to resolve the problems of low or declining productivity or the risks associated with farming. The budgetary allocations used to subsidize credit operations could very likely have a higher social rate of return to society if they could be redirected (or a good portion thereof) towards improved research on better seed varieties; discovering more efficient farming systems for small farmers; more secure and less risky marketing infrastructure, etc... The opportunity cost of short-changing these efforts in order to subsidize short-term credit needs (with all the credit diversions implicit here) is high.

Furthermore, it is counterproductive to penalize agriculture with overvalued exchange rates, subsidized food imports and price controls on foodstuffs and then attempt to offset this with subsidized credit. If the incentives are not in place to allow the farmer to use his credit productively, he will either experience a low rate of return and loan recovery, or he will divert this credit to non-agricultural uses.

Two final elements of reform also require a change in the mind set typically operating in the credit field: a more flexible interest rate policy and efforts at savings mobilization.

In the face of persistently higher inflation, a more flexible interest rate policy is required to cover lending costs and prevent the enormous rise in subsidy to farmers associated with negative real rates of interest. There is no way a program can maintain the real value of its portfolio if interest rates are fixed while inflation rises. Finally a greater effort should be made to restructure interest rates (and engage in other incentives) to encourage the domestic mobilization of savings. Surveys have shown that many more small farmers hold savings instruments than have credit. A program that encourages savings mobilization could have a more favorable impact on income distribution than subsidized credit, and at the same time, allow these institutions greater self-reliance and autonomy from government interference and dependence on uncertain foreign funding. This would require that these institutions and programs would have to become more complete financial intermediaries (or at least some of them) and retool and train themselves for the future with a broader set of responsibilities than they have undertaken in the past.

TABLE 1

Total Loans Outstanding to Agriculture in Jamaica In Current and 1970 Dollars: 1970-1977

Total Agricultural Loans Outstanding In Current Values And In 1970 Dollars (End of Year Balances)

Year	Current Values (J $000)	In 1970 Dollars (J $000)
	(1)	(2)
1970	25,320	25,320
1971	30,557	28,558
1972	35,162	32,141
1973	49,005	37,041
1974	60,060	34,817
1975	112,743	55,731
1976	136,715	61,088
1977	165,821	65,207
1978	167,821	51,605

Sources: Statistical Digest (Bank of Jamaica, various years; Monetary Statistics (Department of Statistics), various years; Annual Reports of the Jamaica Development Bank, Self-Supporting Farmers Development Program.

Note: The Implicit GDP deflator was used to correct for inflation.

TABLE 2

Selected Data on Loan Activity by Farm Size
and Source of Loans in Jamaica
During the 1970s

A. Percentage Distribution of Total Agricultural Loans Outstanding at End of Year by Farm Size Categories And Source for Selected Years in Jamaica

Farm Size and Sources	1971 (1) %	1974 (2) %	1976 (3) %	1977 (4) %	1978 (5) %
I. Large Farmers and Cooperatives	45.8	60.8	77.4	72.0	68.2
(a) Commercial Banks	39.1	44.2	60.2	54.4	48.8
(b) ACB-Direct Loans to Farmers	4.7	4.2	3.0	2.9	3.4
(c) Jamaica Dev. Bank	2.0	12.4	14.2	14.7	16.0
II. Medium-Sized Farmers	13.2	16.2	11.5	12.7	14.9
(a) Self-Supporting Farmer Development Program	13.2	16.2	11.5	12.7	14.9
III. Small Farmers	40.9	22.9	11.0	15.2	16.9
(a) ACB--Peoples Coop. Banks Loans	40.9	22.9	11.0	9.5	9.9
(b) Crop Lien Program (Min. Agric.)	--	--	--	5.7	7.0
TOTAL (%)	100.0	100.0	100.0	100.0	100.0
TOTAL (J$MN)	30.5	60.1	136.7	165.8	167.8

B. Percentage Distribution of the Annual Change in Loans Outstanding to Agriculture (from January 1st to 31st December) by Farm Size Categories and Sources for Selected Years in Jamaica

	1971 (1) %	1974 (2) %	1976 (3) %	1977 (4) %	1978 (5) %
I. Large Farmers and Cooperatives	54.9	76.0	80.2	46.9	-221.2
(a) Commercial Banks	36.0	37.2	47.2	27.4	-453.7
(b) ACB-Direct Loans to Farmers	8.3	2.5	2.3	2.4	46.9
(c) Jamaica Dev. Bank	10.6	36.3	30.7	17.1	185.6
II. Medium-Sized Farmers	36.7	17.2	16.8	18.2	159.5
(a) Self-Supporting Farmer Development Program	36.7	17.2	16.8	18.2	159.5
III. Small Farmers	9.2	6.9	3.0	34.8	161.5
(a) ACB-Peoples Coop. Bank Loans	9.2	6.9	3.0	2.9	38.9
(b) Crop Lien Program (Min. Agric.)	--	--	--	31.9	122.6
TOTAL (%)	100.0	100.0	100.0	100.0	100.0
TOTAL (J$MN)	5.2	11.0	24.0	29.1	1.9

TABLE 3

Credit Ratios and Implicit Credit Subsidy For
The Jamaican Agricultural Credit System in Recent Years

A. Credit Ratios

Year	Agricultural Credit/ Total Credit	Total Credit/ Total GDP	Agricultural Credit/ Agricultural GDP
1970	7.8	27.2	32.3
1971	7.6	30.8	30.7
1972	6.4	31.5	33.0
1973	6.8	41.2	38.2
1974	6.5	41.2	36.9
1975	9.1	46.7	55.9
1976	8.9	55.3	60.1
1977	9.9	61.1	62.6
1978	7.8	62.1	53.2

B. Estimates of Real Rate of Interest for Agricultural Credit and Implicit Credit Subsidy As Percent Of Agricultural GDP

Year	Rate of Inflation	Avg.Nominal Interest Rate Agric.Loans	Real Rate of Interest (Col.2-Col.1)	Agr.Credit/ Agr.GDP	Credit Subsidy as % of Agric. GDP (1)
1975	15.7	10.0	- 5.7	55.8	3.2
1976	8.2	10.0	+ 1.8	60.1	0
1977	14.0	10.0	- 4.0	62.6	2.5
1978	27.9	10.0	-17.9	53.2	9.3

Sources: Statistical Digest (Bank of Jamaica), various years; National Income and Product (Department of Statistics), various years.

Notes for Panel C: (1) Subsidy as a percent of Agric. GDP is estimated by taking the proportion of total outstanding agricultural credit to total agricultural GDP (column 4) and multiplying this by the negative rate of interest (column 3). For this exercise, the appropriate measure of inflation is the implicit GDP deflator.

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